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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,995	04/13/2004	James R. Lattner	2001B127B/2	4672

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EXAMINER	
JOHNSON, EDWARD M	

ART UNIT	PAPER NUMBER
1754	

DATE MAILED: 12/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/822,995	LATTNER ET AL.	
	Examiner	Art Unit	
	Edward M. Johnson	1754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 November 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *30-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *30-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 30-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lattner '005 in view of Harandi '314.

Applicant claims a method of adding heat to a reactor system having an oxygenate to olefin reaction zone and a catalyst regeneration zone wherein catalyst is cycled from the reaction zone to the regeneration zone and from the regeneration zone to the reaction zone, the method comprising: fluidizing catalyst in the presence of an oxygen-containing gas; heating the catalyst in said regeneration zone to a first temperature; introducing a heating fuel into the regeneration zone wherein the heating fuel has about 500 wppm or less of sulfur and has about 200 wppm or less nitrogen and an autoignition temperature greater than the first temperature but no greater than about 482

C (900 F) to provide a heated catalyst, and providing the heated catalyst into the reaction zone.

Lattner et al. discloses a process for converting oxygenates to olefins having a reaction zone and a catalyst regeneration zone, wherein the catalyst is cycled from the reaction zone to the regeneration zone to the reaction zone (see abstract and col. 5, lines 18-25). Lattner et al. discloses a regeneration medium comprised of oxygen (col. 5, lines 26-32). The catalyst is a molecular sieve catalyst.

However, Lattner et al. does not disclose adding a heating fuel into the regeneration zone.

Harandi et al. discloses a process for oligomerization of olefins to higher hydrocarbons, wherein the catalyst is oxidatively regenerated at a temperature in the range of 371-5100C (col. 7, line 65 - col. 8, line 5). Harandi et al. continues to teach wherein the regenerator is operated continuously and in order to keep the regenerator hot during this period, fuel may be added to the regenerator as a source of heat (col. 21, lines 38-44).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the teachings of Lattner et al., based on the teachings of Harandi et al., by introducing a heating fuel into the regeneration zone wherein the heating fuel

has about 500 wppm or less of sulfur and has about 200 wppm or less nitrogen and an autoignition temperature greater than the first temperature but no greater than about 482 C (900 F) to provide a heated catalyst, because Harandi et al. teach wherein the regenerator is operated continuously and in order to keep the regenerator hot during this period, fuel may be added to the regenerator as a source of heat.

Such modification would have been obvious to one of ordinary skill in the art, because one of ordinary skill in the art, would have expected a process having an olefin reaction zone, wherein the catalyst is regenerated in an oxygen atmosphere as taught by Harandi et al., to have been similarly useful and applicable to a process for regenerating a catalyst, which also uses oxygen in a process for producing olefins as taught by Lattner et al. Furthermore, it should be noted that about 500 wppm or less of sulfur and has about 200 wppm or less nitrogen in the heating fuel can read on 0, making the percentage of sulfur and nitrogen in the fuel as disclosed by Harandi obvious to one of ordinary skill in the art.

It would have been further obvious and within the purview of an ordinary artisan to heat the first regeneration zone to at least as high as the autoignition temperature so as to reduce the amount of heat later needed.

With respect to claim 32, it would have been obvious to one of ordinary skill to achieve a desired percentage of nickel and vanadium, based on the teachings of Harandi et al., which teaches having nickel (col. 17, lines 26-30).

Response to Arguments

3. Applicant's arguments filed 11/11/05 have been fully considered but they are not persuasive.

It is argued that Lattner discloses an oxygenates to light olefins... of light olefins. This is not persuasive because, contrary to Applicants assertion, Lattner does disclose regenerating catalyst (abstract) and also because one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

It is argued that Harandi discloses a high pressure... regeneration set-up. This is not persuasive because Lattner et al. discloses the catalyst is cycled from the reaction zone to the regeneration zone to the reaction zone (see abstract and col. 5, lines 18-25) and a regeneration medium comprised of oxygen (col. 5, lines 26-32). One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413,

208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

It is argued that applicants respectfully submit that the skilled artisan... OTO process. This is not persuasive because the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Such modification would have been obvious to one of ordinary skill in the art, because one of ordinary skill in the art, would have expected a process having an olefin reaction zone, wherein the catalyst is regenerated in an oxygen atmosphere as taught by Harandi et al., to have been similarly useful and applicable to a process for regenerating a catalyst, which also uses oxygen in a process for producing olefins as taught by Lattner et al.

It is argued that with respect to the Harandi reference... disclosures of Lattner. This is not persuasive for the reasons above.

It is argued that Applicants respectfully submit that... essentially in hindsight. This is not persuasive because it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

It is argued that in short, this reference combination... albeit for a different purpose and in a different context from that of the present invention. This is not persuasive because the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward M. Johnson whose telephone number is 571-272-1352. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Edward M. Johnson
Primary Examiner
Art Unit 1754

EMJ